

SSSSSSSSSSSSS SSSSSSSSSSSSS SSSSSSSSSSSSS
 MMMM MMMM GGGGGGGGGGGGGGG RRRRRRRRRRRRRRR TTTTTTTTTTTTTTTTT LLL
 MMMM MMMM GGGGGGGGGGGGGGG RRRRRRRRRRRRRRR TTTTTTTTTTTTTTTTT LLL
 MMMM MMMM GGGGGGGGGGGGGGG RRRRRRRRRRRRRRR TTTTTTTTTTTTTTTTT LLL
 SSSS MMMMMM MMMMMM GGG RRR RRR TTT LLL
 SSS MMMMMM MMMMMM GGG RRR RRR TTT LLL
 SSS MMMMMM MMMMMM GGG RRR RRR TTT LLL
 SSS MMMM MMMM MM GGG RRR RRR TTT LLL
 SSS MMMM MMMM MM GGG RRR RRR TTT LLL
 SSS MMMM MMMM MM GGG RRR RRR TTT LLL
 SSS MMMM MMMM MM GGG RRR RRR TTT LLL
 SSSSSSSSSS SSSSSSSSS SSSSSSSSS
 MMMM MMMM GGG RRRRRRRRRRR TTTT LLL
 MMMM MMMM GGG RRRRRRRRRRR TTTT LLL
 MMMM MMMM GGG RRRRRRRRRRR TTTT LLL
 SSSS MMMM MMMM GGG RRR RRR TTT LLL
 SSS MMMM MMMM GGG RRR RRR TTT LLL
 SSSSSSSSSS SSSSSSSSS SSSSSSSSS
 MMMM MMMM GGGGGGGGGG RRR RRR TTT LLL
 MMMM MMMM GGGGGGGGGG RRR RRR TTT LLL
 MMMM MMMM GGGGGGGGGG RRR RRR TTT LLL

SSSSSSSS	MM	MM	GGGGGGGG	NN	NN	UU	UU	MM	MM	TTTTTTTT	AAAAAA	BBBBBBBB
SSSSSSSS	MM	MM	GGGGGGGG	NN	NN	UU	UU	MM	MM	TTTTTTTT	AAAAAA	BBBBBBBB
SS	MMMM	MMMM	GG	NN	NN	UU	UU	MMMM	MMMM	TT	AA	BB
SS	MMMM	MMMM	GG	NN	NN	UU	UU	MMMM	MMMM	TT	AA	BB
SS	MM	MM	GG	NNNN	NN	UU	UU	MM	MM	TT	AA	BB
SS	MM	MM	GG	NNNN	NN	UU	UU	MM	MM	TT	AA	BB
SSSSSS	MM	MM	GG	NN	NN	UU	UU	MM	MM	TT	AA	BB
SSSSSS	MM	MM	GG	NN	NN	UU	UU	MM	MM	TT	AA	BB
SS	MM	MM	GG	GGGGGG	NN	NNNN	UU	MM	MM	TT	AAAAAAA	BB
SS	MM	MM	GG	GGGGGG	NN	NNNN	UU	MM	MM	TT	AAAAAAA	BB
SS	MM	MM	GG	NN	NN	UU	UU	MM	MM	TT	AA	BB
SS	MM	MM	GG	NN	NN	UU	UU	MM	MM	TT	AA	BB
SSSSSSSS	MM	MM	GGGGGG	NN	NN	UUUUUUUUUU	MM	MM	MM	TT	AA	BB
SSSSSSSS	MM	MM	GGGGGG	NN	NN	UUUUUUUUUU	MM	MM	MM	TT	AA	BB

....
....
....
....

LL	IIIIII	SSSSSSSS
LL	IIIIII	SSSSSSSS
LL	II	SS
LLLLLLLL	IIIIII	SSSSSSSS
LLLLLLLL	IIIIII	SSSSSSSS

```
1 0001 0 MODULE SMGSNUMERIC_TABLES( %TITLE 'TPARSE tables for numeric capabilities'
2 0002 0 IDENT = '1-003' ! File: SMGNUMTAB.B32 Edit: PLL1003
3 0003 0 )
4 0004 1 BEGIN
5 0005 1 ****
6 0006 1 ****
7 0007 1 *
8 0008 1 * COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
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25 0025 1 *
26 0026 1 *
27 0027 1 ****
28 0028 1 .
29 0029 1 .
30 0030 1 ++
31 0031 1 FACILITY: Screen Management
32 0032 1 ABSTRACT:
33 0033 1
34 0034 1
35 0035 1 This module contains the LIB$TPARSE state tables used to parse
36 0036 1 numeric capabilities in an ascii TERMTABLE.TXT file.
37 0037 1
38 0038 1 ENVIRONMENT: User mode - AST reentrant
39 0039 1
40 0040 1 AUTHOR: P. Levesque CREATION DATE: 30-Jan-1984
41 0041 1
42 0042 1 MODIFIED BY:
43 0043 1
44 0044 1 1-001 - Original. PLL 30-Jan-1984
45 0045 1 1-002 - Allow comments on lines not terminated by comma. PLL 15-Mar-1984
46 0046 1 1-003 - Add frame capability. PLL 29-Mar-1984
47 0047 1 !--
48 0048 1
```

```
50      0049 1 %SBTTL 'Declarations'  
51      0050 1  
52      0051 1 | SWITCHES:  
53      0052 1 |  
54      0053 1 |  
55      0054 1 |  
56      0055 1 | LINKAGES:  
57      0056 1 |  
58      0057 1 |     NONE  
59      0058 1 |  
60      0059 1 | TABLE OF CONTENTS:  
61      0060 1 |  
62      0061 1 |  
63      0062 1 FORWARD ROUTINE  
64          0063 1     CONVERT_NUMERIC,  
65          0064 1     NOT_NUMERIC;  
66          0065 1 |  
67          0066 1 |  
68          0067 1 | INCLUDE FILES:  
69          0068 1 |  
70          0069 1 |  
71          0070 1 REQUIRE 'RTLIN:SMGPROLOG';           ! Defines psects, macros, etc.  
72          0148 1  
73          0149 1 LIBRARY 'RTLML:SMGTPALIB';        ! Definitions and macros used  
74          0150 1  
75          0151 1 LIBRARY 'RTLTPAMAC';            ! to create TERMTABLE.EXE  
76          0152 1  
77          0153 1 |  
78          0154 1 | EQUATED SYMBOLS:  
79          0155 1 |  
80          0156 1 |     NONE  
81          0157 1 |  
82          0158 1 | FIELDS:  
83          0159 1 |  
84          0160 1 |     NONE  
85          0161 1 |  
86          0162 1 | PSECTS:  
87          0163 1 |  
88          0164 1 |  
89          0165 1 |  
90          0166 1 | EXTERNAL REFERENCES:  
91          0167 1 |  
92          0168 1 EXTERNAL ROUTINE  
93          0169 1     OTSSCVT TI L,  
94          0170 1     SMGSSBLANKS OFF,  
95          0171 1     SMGSSFLUSH NUMERIC,  
96          0172 1     SMGSSMISSING END,  
97          0173 1     SMGSSNEXT_RECORD,  
98          0174 1     SMGSSSAVE_TOKEN STRING,  
99          0175 1     SMGSSSTORE CAP MASK,  
100         0176 1     SMGSSSYNTAX_ERROR;  
101         0177 1 |  
102         0178 1 EXTERNAL  
103         0179 1     SMGS_ERRAT LIN,  
104         0180 1     SMGS_MISTERNAME,  
105         0181 1     SMGS_NOTNUMCAP,  
106         0182 1     SMGS_SYNERR;
```

| convert ascii to binary integer
| signal an unknown capability name

| Defines psects, macros, etc.
| Definitions and macros used
| to create TERMTABLE.EXE
| TPARSE library of macros

| convert ascii digits to integer
| turn off flag to process blanks
| flush numeric value to data area
| signal error
| get next record from TERMTABLE.TXT
| store ptr & count for token
| remember capability number
| signal syntax error

| error in line n at or near 'x'
| missing terminal name
| not a numeric capability
| syntax error

```
: 107      0183 1
: 108      0184 1 EXTERNAL
: 109      0185 1      SMGSSMASK_ADR,
: 110      0186 1      SMGSSCURRENT_LINE;
: 111      0187 1
: 112      0188 1      ! OWN STORAGE:
: 113      0189 1
: 114      0190 1
: 115      0191 1      NONE
```

! used by TPARSE action routines
! current input line - maintained
! for error messages

```
117      0192 1 %SBTTL 'SMG$NUMERIC_TABLES - TPARSE tables for numeric capabilities'  
118      0193 1 ++  
119      0194 1   FUNCTIONAL DESCRIPTION:  
120      0195 1  
121      0196 1   The following are the state tables used to parse numeric  
122      0197 1   capabilities in a terminal definition.  
123      0198 1  
124      0199 1   --  
125      0200 1  
126      0201 1 $INIT_STATE (SMG$A_NUMERIC_STATES, SMG$A_NUMERIC_KEYWDS);  
127      0202 1   ! set up state tables, key words  
128      0203 1  
129      0204 1   +  
130      0205 1   Begin scanning loop. Look for the start of a capability.  
131      0206 1   Skip over blanks and comments.  
132      0207 1   -  
133      0208 1  
134      P 0209 1 $STATE (BEGIN_SCAN,  
135      P 0210 1   ((END_OF_LINE), BEGIN_SCAN, SMG$NEXT_RECORD),  
136      P 0211 1   ('!', BEGIN_SCAN, SMG$NEXT_RECORD),  
137      P 0212 1   ((CAPABILITY), BEGIN_SCAN, SMG$BLANKS_OFF),  
138      P 0213 1   (TPAS_LAMBDA, TPAS_EXIT)  
139      P 0214 1   );  
140      P 0215 1  
141      P 0216 1   +  
142      P 0217 1   This state indicates the end of a line. A comment also signals the  
143      P 0218 1   end of a line.  
144      P 0219 1   -  
145      P 0220 1  
146      P 0221 1 $STATE (END_OF_LINE,  
147      P 0222 1   (TPAS_EOS, TPAS_EXIT),  
148      P 0223 1   ('!', TPAS_EXIT),  
149      P 0224 1   (TPAS_LAMBDA, TPAS_FAIL)  
150      P 0225 1   );  
151      P 0226 1  
152      P 0227 1   +  
153      P 0228 1   Find the capability name and determine if it's one that we expect.  
154      P 0229 1   The string up to the '=' sign should be the capability name.  
155      P 0230 1   -  
156      P 0231 1  
157      P 0232 1 $STATE (CAPABILITY,  
158      P 0233 1   ((NUMERIC_NAME), EQUALS_NUMERIC, SMG$BLANKS_OFF),  
159      P 0234 1   ('END', TPAS_FAIL),  
160      P 0235 1   ('BOOLEAN', TPAS_FAIL),  
161      P 0236 1   ('NUMERIC', BEGIN_SCAN),  
162      P 0237 1   ('STRING', TPAS_FAIL),  
163      P 0238 1   ('REQUIRE', TPAS_FAIL, SMG$MISSING_END),  
164      P 0239 1   ('NAME', TPAS_FAIL, SMG$MISSING_END),  
165      P 0240 1   (TPAS_SYMBOL, NOT_NUMERIC)  
166      P 0241 1   );  
167      P 0242 1  
168      P 0243 1   +  
169      P 0244 1   Check for a numeric name here.  
170      P 0245 1   -  
171      P 0246 1  
172      P 0247 1 $STATE (NUMERIC_NAME,  
173      P 0248 1   ('COLUMNS', TPAS_EXIT, SMGSK_COLUMNS, SMG$MASK_ADR),
```

```

174      P 0249 1  ('CR FILL', TPAS_EXIT, SMGSK_CR_FILL, SMGSSMASK_ADR),
175      P 0250 1  ('FRAME', TPAS_EXIT, SMGSK_FRAME, SMGSSMASK_ADR),
176      P 0251 1  ('LF FILL', TPAS_EXIT, SMGSK_LF_FILL, SMGSSMASK_ADR),
177      P 0252 1  ('NUMBER_FN KEYS', TPAS_EXIT, SMGSK_NUMBER_FN_KEYS, SMGSSMASK_ADR),
178      P 0253 1  ('ROWS', TPAS_EXIT, SMGSK_ROWS, SMGSSMASK_ADR),
179      P 0254 1  ('WIDE SCREEN-COLUMNS', TPAS_EXIT, SMGSK_WIDE_SCREEN_COLUMNS, SMGSSMASK_ADR),
180      P 0255 1  ('PRIVATE_NUM_1', TPAS_EXIT, SMGSK_PRIVATE_NUM_1, SMGSSMASK_ADR),
181      P 0256 1  ('PRIVATE_NUM_2', TPAS_EXIT, SMGSK_PRIVATE_NUM_2, SMGSSMASK_ADR),
182      P 0257 1  ('PRIVATE_NUM_3', TPAS_EXIT, SMGSK_PRIVATE_NUM_3, SMGSSMASK_ADR),
183      P 0258 1  ('PRIVATE_NUM_4', TPAS_EXIT, SMGSK_PRIVATE_NUM_4, SMGSSMASK_ADR),
184      P 0259 1  ('PRIVATE_NUM_5', TPAS_EXIT, SMGSK_PRIVATE_NUM_5, SMGSSMASK_ADR),
185      P 0260 1  ('PRIVATE_NUM_6', TPAS_EXIT, SMGSK_PRIVATE_NUM_6, SMGSSMASK_ADR),
186      P 0261 1  ('PRIVATE_NUM_7', TPAS_EXIT, SMGSK_PRIVATE_NUM_7, SMGSSMASK_ADR),
187      P 0262 1  ('PRIVATE_NUM_8', TPAS_EXIT, SMGSK_PRIVATE_NUM_8, SMGSSMASK_ADR),
188      P 0263 1  ('PRIVATE_NUM_9', TPAS_EXIT, SMGSK_PRIVATE_NUM_9, SMGSSMASK_ADR),
189      P 0264 1  ('PRIVATE_NUM_10', TPAS_EXIT, SMGSK_PRIVATE_NUM_10, SMGSSMASK_ADR),
190      P 0265 1  (TPAS_LAMBDA, TPAS_FAIL)
191      0266 1  );
192      0267 1
193      0268 1  !+
194      0269 1  ! Skip over intervening equals sign.
195      0270 1  !-
196      0271 1
197      P 0272 1 $STATE (EQUALS_NUMERIC,
198      P 0273 1  ((END_OF_LINE), EQUALS_NUMERIC, SMGSSNEXT_RECORD),
199      P 0274 1  ('='-NUMERIC_CAP_VALUE, SMGSSSTORE_CAP_MASK),
200      P 0275 1  (TPAS_SYMBOL, SMGSSSYNTAX_ERROR),
201      P 0276 1  (TPAS_ANY, SMGSSSYNTAX_ERROR)
202      0277 1  );
203      0278 1
204      0279 1  !+
205      0280 1  ! Get the numeric capability value.
206      0281 1  !-
207      0282 1
208      P 0283 1 $STATE (NUMERIC_CAP_VALUE,
209      P 0284 1  ((END_OF_LINE), NUMERIC_CAP_VALUE, SMGSSNEXT_RECORD),
210      P 0285 1  ((NUMERIC_CAP), BEGIN_SCAN),
211      P 0286 1  (TPAS_SYMBOL, SMGSSSYNTAX_ERROR),
212      P 0287 1  (TPAS_ANY, SMGSSSYNTAX_ERROR)
213      0288 1  );
214      0289 1
215      0290 1  !+
216      0291 1  ! This is a numeric capability. Convert ascii to binary and store it
217      0292 1  ! in TERMTABLE.EXE.
218      0293 1  !-
219      0294 1
220      P 0295 1 $STATE (NUMERIC_CAP,
221      P 0296 1  (TPAS_DIGIT, NUMERIC_CAP, SMGSSSAVE_TOKEN_STRING),
222      P 0297 1  ((COMMA), TPAS_EXIT, CONVERT_NUMERIC),
223      P 0298 1  ((END_OF_LINE), NEW_RECORD, CONVERT_NUMERIC),
224      P 0299 1  (TPAS_ANY, SMGSSSYNTAX_ERROR)
225      0300 1  );
226      0301 1
227      P 0302 1 $STATE (COMMA,
228      P 0303 1  (' ', TPAS_EXIT, SMGSSBLANKS_OFF),
229      P 0304 1  (TPAS_BLANK, COMMA, SMGSSBLANKS_OFF),
230      P 0305 1  (TPAS_LAMBDA, TPAS_FAIL)

```

SMG\$NUMERIC_TAB TPARSE tables for numeric capabilities
1-003 SMG\$NUMERIC_TABLES - TPARSE tables for numeric

16-Sep-1984 01:08:25
9
14-Sep-1984 13:09:57

VAX-11 Bliss-32 V4.0-742
[SMGRTL.SRC]SMGNUMTAB.B32;1

Page 6
1-
(3)

```
: 231      0306 1    );
: 232      0307 1    );
: 233      P 0308 1 $STATE (NEW_RECORD
: 234      P 0309 1   (TPAS_LAMBDA, fPAS_EXIT, SMG$NEXT_RECORD)
: 235      0310 1    );
: 236      0311 1    );
```

```
238      0312 1 %SBTLL 'CONVERT_NUMERIC - Convert ascii to binary integer'  
239      0313 1 ROUTINE CONVERT_NUMERIC =  
240  
241      0315 1 ++  
242      0316 1 FUNCTIONAL DESCRIPTION:  
243      0317 1 Converts an ascii string to binary integer. The integer is  
244      0318 1 stored in the location of the current capability data in  
245      0319 1 TERMTABLE.EXE.  
246      0320 1  
247      0321 1 CALLING SEQUENCE:  
248      0322 1     status = CONVERT_NUMERIC ()  
249      0323 1  
250      0324 1 FORMAL PARAMETERS:  
251      0325 1  
252      0326 1     NONE  
253      0327 1  
254      0328 1 IMPLICIT INPUTS:  
255      0329 1  
256      0330 1     AP      Points to TPARSE parameter block  
257      0331 1  
258      0332 1 IMPLICIT OUTPUTS:  
259      0333 1  
260      0334 1     NONE  
261      0335 1  
262      0336 1  
263      0337 1 COMPLETION STATUS:  
264      0338 1  
265      0339 1     SSS_NORMAL  
266      0340 1  
267      0341 1  
268      0342 1 SIDE EFFECTS:  
269      0343 1  
270      0344 1 --  
271      0345 1  
272      0346 2 BEGIN  
273  
274      0348 2     BUILTIN  
275      0349 2     CALLG,  
276      0350 2     AP;  
277      0351 2     MAP  
278      0352 2     AP : REF BLOCK [,BYTE];  
279      0353 2  
280      0354 2 +  
281      0355 2 | If we didn't find any digits, then there is nothing to convert.  
282      0356 2 |-  
283      0357 2  
284      0358 2 IF .AP [PARAM_L_SAVED_TOKENCNT] EQ 0  
285      0359 2 THEN  
286      0360 2     RETURN (SSS_NORMAL);  
287      0361 2  
288      0362 2 +  
289      0363 2 | If this is not the NAME capability and we have no pointers set up  
290      0364 2 | for the terminal definition, then NAME was not the first capability  
291      0365 2 | in the definition. Complain.  
292      0366 2 |-  
293      0367 2  
294      0368 2 BEGIN
```

```

: 295      0369  3      BIND
: 296      0370  3      CAP_PTRS = .AP [PARAM_L_CUR_TERM_DEF] : VECTOR [,WORD];
: 297      0371  3
: 298      0372  3      IF CAP_PTRS EQL 0
: 299      0373  3      THEN
: 300      0374  3      SIGNAL_STOP (SMGS_MISTERNAM);
: 301      0375  3
: 302      0376  3
: 303      0377  3      Move the capability data. The byte count is in the first byte and
: 304      0378  3      the actual data follows.
: 305      0379  3
: 306      0380  3      We must convert the ascii digits to binary.
: 307      0381  3
: 308      0382  3
: 309      0383  4      BEGIN
: 310      0384  4      LOCAL
: 311      0385  4      STATUS,
: 312      0386  4      INPUT_STRING_DESC : BLOCK [8,BYTE];
: 313      0387  4
: 314      0388  4      INPUT_STRING_DESC [DSC$B_DTYPE] = DSC$K_DTYPE_T;
: 315      0389  4      INPUT_STRING_DESC [DSC$B_CLASS] = DSC$K_CLASS_S;
: 316      0390  4      INPUT_STRING_DESC [DSC$W_LENGTH] = .AP [PARAM_L_SAVED_TOKENCNT];
: 317      0391  4      INPUT_STRING_DESC [DSC$A_POINTER] = .AP [PARAM_L_SAVED_TOKENSTR];
: 318      0392  4
: 319      0393  5      IF NOT (STATUS = OTSSCVT_TI_L (INPUT_STRING_DESC, AP [TPASL_NUMBER]))
: 320      0394  4      THEN
: 321      0395  4      SIGNAL_STOP (SMGS_ERRAT LIN,
: 322      0396  4          3. SMG$CURRENT_LINE,
: 323      0397  4          .AP [PARAM_L_SAVED_TOKENCNT],
: 324      0398  4          .AP [PARAM_L_SAVED_TOKENSTR],
: 325      0399  4          .STATUS);
: 326      0400  4
: 327      0401  4      CALLG (.AP, SMG$FLUSH_NUMERIC); ! move value to data area
: 328      0402  4
: 329      0403  3      END;
: 330      0404  3
: 331      0405  3
: 332      0406  2      END;                                ! end of BINDs scope
: 333      0407  2
: 334      0408  2
: 335      0409  2      Re-initialize capability string.
: 336      0410  2
: 337      0411  2
: 338      0412  2      AP [PARAM_L_SAVED_TOKENCNT] = 0;
: 339      0413  2      AP [PARAM_L_SAVED_TOKENSTR] = 0;
: 340      0414  2
: 341      0415  2      RETURN (SS$_NORMAL);
: 342      0416  2
: 343      0417  1      END;                                ! end of routine CONVERT_NUMERIC
:
```

```

: .TITLE SMG$NUMERIC_TABLES TPARSE tables for numeric ca
: pabilities
: .IDENT \1-003\
: .PSECT _LIB$KEY1$,NOWRT, SHR, PIC,1
:
```

		00000	:TPASKEYSTO															
44	4E	45	00000	U.29: .BLKB	0													
			:TPASKEYST	U.31: .ASCII	\E \\													
	FF		00003	BYTE	-1													
			00004	:TPASKEYSTO														
4E	41	45	4C	4F	42	00004	U.34: .BLKB	0										
							:TPASKEYST											
					FF	0000B	U.36: .ASCII	\BOOLEAN\\										
						0000C	BYTE	-1										
43	49	52	45	4D	55	4E	0000C	:TPASKEYSTO										
							U.39: .BLKB	0										
					FF	00013	U.41: .ASCII	\NUMERIC\\										
						00014	BYTE	-1										
47	4E	49	52	54	53	00014	:TPASKEYSTO											
					FF	0001A	U.44: .BLKB	0										
						0001B	U.46: .ASCII	\STRING\\										
					FF	0001A	BYTE	-1										
45	52	49	55	51	45	52	0001B	:TPASKEYSTO										
							U.49: .BLKB	0										
					FF	00022	U.51: .ASCII	\REQUIRE\\										
						00023	BYTE	-1										
45	4D	41	4E	00023	:TPASKEYST													
					FF	00027	U.55: .BLKB	0										
						00028	U.57: .ASCII	\NAME\\										
					FF	00027	BYTE	-1										
					FF	00028	:TPASKEYFILL											
						00029	U.63: .BYTE	-1										
53	4E	4D	55	4C	4F	43	00029	:TPASKEYSTO										
							U.64: .BLKB	0										
					FF	00030	U.66: .ASCII	\COLUMNS\\										
						00031	BYTE	-1										
4C	4C	49	46	5F	52	43	00031	:TPASKEYST										
							U.71: .BLKB	0										
					FF	00038	U.73: .ASCII	\CR_FILL\\										
						00039	BYTE	-1										
45	4D	41	52	46	00039	:TPASKEYST												
					FF	0003E	U.78: .BLKB	0										
						0003F	U.80: .ASCII	\FRAME\\										
					FF	0003E	BYTE	-1										
4C	4C	49	46	5F	46	4C	0003F	:TPASKEYST										
							U.85: .BLKB	0										
					FF	00046	U.87: .ASCII	\LF_FILL\\										
						00047	BYTE	-1										
53	59	45	48	5F	4E	46	5F	52	45	42	4D	55	4E	00047	:TPASKEYST			
								U.92: .BLKB	0									
					FF	00055	U.94: .ASCII	\NUMBER_FN_KEYS\\										
							BYTE	-1										

SMGSNUMERIC_TAB TPARSE tables for numeric capabilities
1-003 CONVERT_NUMERIC - Convert ascii to bin

N 9

16-Sep-1984 01:08:25
14-Sep-1984 13:09:57

VAX-11 Bliss-32 V4.0-742
[SMGRTL.SRC]SMGNUMTAB.B32;1

Page 10
(4)

```

30 31 SF 4D 55 4E 5F 45 54 41 56 49 52 50 000ED U.176: BLKB 0
          ;TPASKEY$T
FF 000FB U.178: .ASCII \PRIVATE_NUM_10\
FF 000FC :TPASKEY$FILL
U.185: .BYTE -1

.PSECT _LIB$STATES,NOWRT, SHR, PIC,1

00000 SMGSSA_NUMERIC_STATES::
00000 BEGIN_SCAN:
99F8 00000 ;TPASTYPE
U.2: .WORD -26120
0000* 00002 ;TPASSUBEXP
U.4: .WORD <<U.3-U.4>-2>
00000000* 00004 ;TPSACTION
U.5: .LONG <<SMG$NEXT_RECORD-U.5>-4>
0000* 00008 ;TPASTARGET
U.6: .WORD <<BEGIN_SCAN-U.6>-2>
9021 0000A ;TPASTYPE
U.7: .WORD -28639
00000000* 0000C ;TPSACTION
U.8: .LONG <<SMG$NEXT_RECORD-U.8>-4>
0000* 00010 ;TPASTARGET
U.9: .WORD <<BEGIN_SCAN-U.9>-2>
99F8 00012 ;TPASTYPE
U.10: .WORD -26120
0000* 00014 ;TPASSUBEXP
U.12: .WORD <<U.11-U.12>-2>
00000000* 00016 ;TPSACTION
U.13: .LONG <<SMG$$BLANKS_OFF-U.13>-4>
0000* 0001A ;TPASTARGET
U.14: .WORD <<BEGIN_SCAN-U.14>-2>
15F6 0001C ;TPASTYPE
U.15: .WORD 5622
FFFF 0001E ;TPASTARGET
U.16: .WORD -1
00020 ;END_OF_LINE
U.3: BLKB 0
11F7 00020 ;TPASTYPE
U.17: .WORD 4599
FFFF 00022 ;TPASTARGET
U.18: .WORD -1
1021 00024 ;TPASTYPE
U.19: .WORD 4129
FFFF 00026 ;TPASTARGET
U.20: .WORD -1
15F6 00028 ;TPASTYPE
U.21: .WORD 5622
FFFE 0002A ;TPASTARGET
U.22: .WORD -2
0002C ;CAPABILITY
U.11: BLKB 0
99F8 0002C ;TPASTYPE
U.23: .WORD -26120

```

0000* 0002E	:TPASSUBEXP	
00000000* 00030	U.25: WORD	<<U.24-U.25>-2>
0000* 00034	U.26: LONG	<<SMG\$BLANKS_OFF-U.26>-4>
1100 00036	U.28: WORD	<<U.27-U.28>-2>
FFFE 00038	U.32: WORD	4352
1101 0003A	U.33: WORD	-2
FFFE 0003C	U.37: WORD	4353
1102 0003E	U.38: WORD	-2
0000* 00040	U.42: WORD	4354
1103 00042	U.43: WORD	<<BEGIN_SCAN-U.43>-2>
FFFE 00044	U.47: WORD	4355
9104 00046	U.48: WORD	-2
00000000* 00048	U.52: WORD	-28412
FFFE 0004C	U.53: LONG	<<SMG\$MISSING_END-U.53>-4>
9105 0004E	U.54: WORD	-2
00000000* 00050	U.58: WORD	-28411
FFFE 00054	U.59: LONG	<<SMG\$MISSING_END-U.59>-4>
85F1 00056	U.60: WORD	-2
00000000V 00058	U.61: WORD	-31247
0005C	:NUMERIC_NAME	<<NOT_NUMERIC-U.62>-4>
7106 0005C	U.24: BLKB	0
00000000* 0005E	U.67: WORD	28934
0000000D 00062	U.68: LONG	<<SMG\$MASK_ADR-U.68>-4>
FFFF 00066	U.69: LONG	221
7107 00068	U.70: WORD	-1
00000000* 0006A	U.74: WORD	28935
000000DE 0006E	U.75: LONG	<<SMG\$MASK_ADR-U.75>-4>
FFFF 00072	U.76: LONG	222
7108 00074	U.77: WORD	-1

00000000*	00076	U.81: WORD	28936	:
000000DF	0007A	U.82: LONG	<<SMGSSMASK_ADR-U.82>-4>	:
FFFF	0007E	U.83: LONG	223	:
7109	00080	U.84: WORD	-1	:
00000000*	00082	U.88: WORD	28937	:
000000E0	00086	U.89: LONG	<<SMGSSMASK_ADR-U.89>-4>	:
FFFF	0008A	U.90: LONG	224	:
710A	0008C	U.91: WORD	-1	:
00000000*	0008E	U.95: WORD	28938	:
000000E1	00092	U.96: LONG	<<SMGSSMASK_ADR-U.96>-4>	:
FFFF	00096	U.97: LONG	225	:
710B	00098	U.98: WORD	-1	:
00000000*	0009A	U.102: WORD	28939	:
000000E2	0009E	U.103: LONG	<<SMGSSMASK_ADR-U.103>-4>	:
FFFF	000A2	U.104: LONG	226	:
710C	000A4	U.105: WORD	-1	:
00000000*	000A6	U.109: WORD	28940	:
000000E4	000AA	U.110: LONG	<<SMGSSMASK_ADR-U.110>-4>	:
FFFF	000AE	U.111: LONG	228	:
710D	000B0	U.112: WORD	-1	:
00000000*	000B2	U.116: WORD	28941	:
000001AF	000B6	U.117: LONG	<<SMGSSMASK_ADR-U.117>-4>	:
FFFF	000BA	U.118: LONG	431	:
710E	000BC	U.119: WORD	-1	:
00000000*	000BE	U.123: WORD	28942	:
000001B0	000C2	U.124: LONG	<<SMGSSMASK_ADR-U.124>-4>	:
FFFF	000C6	U.125: LONG	432	:
710F	000C8	U.126: WORD	-1	:
		U.130: WORD	28943	:

00000000*	000CA	:TPASADDR	
000001B1	000CE	:TPASMASK	<<SMG\$MASK_ADR-U.131>-4>
FFFF	000D2	:TPASTARGET	;
7110	000D4	:TPASTYPE	;
00000000*	000D6	:TPASADDR	;
000001B2	000DA	:TPASMASK	<<SMG\$MASK_ADR-U.138>-4>
FFFF	000DE	:TPASTARGET	;
7111	000EO	:TPASTYPE	;
00000000*	000E2	:TPASADDR	;
000001B3	000E6	:TPASMASK	<<SMG\$MASK_ADR-U.145>-4>
FFFF	000EA	:TPASTARGET	;
7112	000EC	:TPASTYPE	;
00000000*	000EE	:TPASADDR	;
000001B4	000F2	:TPASMASK	<<SMG\$MASK_ADR-U.152>-4>
FFFF	000F6	:TPASTARGET	;
7113	000FB	:TPASTYPE	;
00000000*	000FA	:TPASADDR	;
000001B5	000FE	:TPASMASK	<<SMG\$MASK_ADR-U.159>-4>
FFFF	00102	:TPASTARGET	;
7114	00104	:TPASTYPE	;
00000000*	00106	:TPASADDR	;
000001B6	0010A	:TPASMASK	<<SMG\$MASK_ADR-U.166>-4>
FFFF	0010E	:TPASTARGET	;
7115	00110	:TPASTYPE	;
00000000*	00112	:TPASADDR	;
000001B7	00116	:TPASMASK	<<SMG\$MASK_ADR-U.173>-4>
FFFF	0011A	:TPASTARGET	;
7116	0011C	:TPASTYPE	;
00000000*	0011E	:TPASADDR	28950

000001B8	00122	U.180: .LONG	<<SMG\$SMASK_ADR-U.180>-4>	:
FFFF	00126	U.181: .LONG	440	:
15F6	00128	U.182: .WORD	-1	:
FFFE	0012A	U.183: .WORD	5622	:
	0012C	U.184: .WORD	-2	:
	0012C	EQUALS_NUMERIC		:
99F8	0012C	U.27: .BLKB	0	:
0000*	0012E	U.186: .WORD	-26120	:
00000000*	00130	U.187: .WORD	<<U.3-U.187>-2>	:
0000*	00134	U.188: .LONG	<<SMG\$SNEXT_RECORD-U.188>-4>	:
903D	00136	U.189: .WORD	<<U.27-U.189>-2>	:
00000000*	00138	U.190: .WORD	-28611	:
0000*	0013C	U.191: .LONG	<<SMG\$\$STORE_CAP_MASK-U.191>-4>	:
81F1	0013E	U.192: .WORD	<<U.192-U.193>-2>	:
00000000*	00140	U.193: .WORD	-32271	:
85ED	00144	U.194: .WORD	<<SMG\$\$SYNTAX_ERROR-U.195>-4>	:
00000000*	00146	U.195: .LONG	-31251	:
0014A	0014A	U.196: .WORD	<<SMG\$\$SYNTAX_ERROR-U.197>-4>	:
99F8	0014A	U.197: .NUMERIC_CAP_VALUE		:
0000*	0014C	U.198: .BLKB	0	:
00000000*	0014E	U.199: .WORD	-26120	:
0000*	00152	U.200: .WORD	<<U.3-U.199>-2>	:
19F8	00154	U.201: .WORD	<<SMG\$SNEXT_RECORD-U.200>-4>	:
0000*	00156	U.202: .WORD	<<U.192-U.201>-2>	:
0000*	00158	U.203: .WORD	6648	:
81F1	0015A	U.204: .WORD	<<U.203-U.204>-2>	:
00000000*	0015C	U.205: .WORD	<<BEGIN_SCAN-U.205>-2>	:
85ED	00160	U.206: .WORD	-32271	:
00000000*	00162	U.207: .LONG	<<SMG\$\$SYNTAX_ERROR-U.207>-4>	:
		U.208: .WORD	-31251	:
		U.209: .LONG	<<SMG\$\$SYNTAX_ERROR-U.209>-4>	:

SMGSNUMERIC_TAB TPARSE tables for numeric capabilities
1-003 **CONVERT_NUMERIC** - Convert ascii to binary

610

16-Sep-1984 01:08:25
14-Sep-1984 13:09:57

VAX-11 BLISS-32 V4.0-742
[SMGRTL.SRC]SMGNUMTAB.B32;1

Page 16
(4)

	00166	;NUMERIC_CAP	
91EF	00166	;TPASTYPE	0
00000000*	00168	;TPASACTION	-28177
0000*	0016C	;TPASTARGET	<<SMG\$SAVE_TOKEN_STRING-U.211>-4>
99F8	0016E	;TPASTYPE	<<U.203-U.212>-2>
0000*	00170	;TPASSUBEXP	-26120
00000000*	00172	;TPASACTION	<<U.214-U.215>-2>
FFFF	00176	;TPASTARGET	<<CONVERT_NUMERIC-U.216>-4>
99F8	00178	;TPASTYPE	-1
0000*	0017A	;TPASSUBEXP	-26120
00000000*	0017C	;TPASACTION	<<U.3-U.219>-2>
0000*	00180	;TPASTARGET	<<CONVERT_NUMERIC-U.220>-4>
85ED	00182	;TPASTYPE	<<U.221-U.222>-2>
00000000*	00184	;TPASACTION	-31251
00188		;COMMA	<<SMG\$SYNTAX_ERROR-U.224>-4>
902C	00188	;TPASTYPE	0
00000000*	0018A	;TPASACTION	-28628
FFFF	0018E	;TPASTARGET	<<SMG\$BLANKS_OFF-U.226>-4>
91F2	00190	;TPASTYPE	-1
00000000*	00192	;TPASACTION	-28174
0000*	00196	;TPASTARGET	<<SMG\$BLANKS_OFF-U.229>-4>
15F6	00198	;TPASTYPE	<<U.214-U.230>-2>
FFFE	0019A	;TPASTARGET	5622
0019C		;NEW RECORD	-2
95F6	0019C	;TPASTYPE	0
00000000*	0019E	;TPASACTION	-27146
FFFF	001A2	;TPASTARGET	<<SMG\$NEXT_RECORD-U.234>-4>
	001A2	;WORD	-1

00000 SMG\$SA_NUMERIC_KEYWORDS::
00000 ;TPASKEY BLKB 0
00000 ;TPASKEY U.1: BLKB 0
0000* 00000 ;TPASKEY U.30: WORD <U.29-U.1>
0000* 00002 ;TPASKEY U.35: WORD <U.34-U.1>
0000* 00004 ;TPASKEY U.40: WORD <U.39-U.1>
0000* 00006 ;TPASKEY U.45: WORD <U.44-U.1>
0000* 00008 ;TPASKEY U.50: WORD <U.49-U.1>
0000* 0000A ;TPASKEY U.56: WORD <U.55-U.1>
0000* 0000C ;TPASKEY U.65: WORD <U.64-U.1>
0000* 0000E ;TPASKEY U.72: WORD <U.71-U.1>
0000* 00010 ;TPASKEY U.79: WORD <U.78-U.1>
0000* 00012 ;TPASKEY U.86: WORD <U.85-U.1>
0000* 00014 ;TPASKEY U.93: WORD <U.92-U.1>
0000* 00016 ;TPASKEY U.100: WORD <U.99-U.1>
0000* 00018 ;TPASKEY U.107: WORD <U.106-U.1>
0000* 0001A ;TPASKEY U.114: WORD <U.113-U.1>
0000* 0001C ;TPASKEY U.121: WORD <U.120-U.1>
0000* 0001E ;TPASKEY U.128: WORD <U.127-U.1>
0000* 00020 ;TPASKEY U.135: WORD <U.134-U.1>
0000* 00022 ;TPASKEY U.142: WORD <U.141-U.1>
0000* 00024 ;TPASKEY U.149: WORD <U.148-U.1>
0000* 00026 ;TPASKEY U.156: WORD <U.155-U.1>
0000* 00028 ;TPASKEY U.163: WORD <U.162-U.1>
0000* 0002A ;TPASKEY U.170: WORD <U.169-U.1>
0000* 0002C ;TPASKEY U.177: WORD <U.176-U.1>
.EXTRN OTSSCVT TI_L SMG\$SBLNKS_OFF
.EXTRN SMG\$\$FLOSH_NUMERIC
.EXTRN SMG\$\$MISSING END
.EXTRN SMG\$\$NEXT RECORD
.EXTRN SMG\$\$SAVE TOKEN STRING
.EXTRN SMG\$\$STORE_CAP_MASK

.EXTRN SMG\$SYNTAX_ERROR
.EXTRN SMGS_ERRAT [IN, SMGS_MISTERNAM
.EXTRN SMGS_NOTNUMCAP, SMGS_SYNERR
.EXTRN SMG\$MASK_ADR, SMG\$CURRENT_LINE
.PSECT SMG\$CODE,NOWRT, SHR, PIC,2

0004 00000 CONVERT_NUMERIC:

52	00000000G	00	9E	00002		WORD	SAVE R2				0313
5E		08	C2	00009		MOVAB	LIBSTOP, R2				
	54	AC	D2	0000C		SUBL2	#8, SP				0358
	48	4E	12	0000F		TSTL	84(AP)				0372
		AC	D5	00011		BEQL	3\$				
		09	12	00014		TSTL	72(AP)				
	00000000G	00	9F	00016		BNEQ	1\$				0374
62		01	FB	0001C		PUSHAB	SMGS_MISTERNAM				
02	AE	010E	8F	B0	0001F	CALLS	#1, LIBSTOP				0388
	6E	54	AC	B0	00025	MOVW	#270, INPUT_STRING_DESC+2				0390
04	AE	58	AC	D0	00029	MOVW	84(AP), INPUT_STRING_DESC				0391
		1C	AC	9F	0002E	MOVL	88(AP), INPUT_STRING_DESC+4				0393
		04	AE	9F	00031	PUSHAB	28(AP)				
00000000G	00	02	FB	00034		PUSHAB	INPUT_STRING_DESC				
	17	50	E8	0003B		CALLS	#2, OTSSCVT_TIL				
		50	DD	0003E		BLBS	STATUS, 2\$				
7E	54	AC	7D	00040		PUSHL	STATUS				0399
	00000000G	00	DD	00044		MOVQ	84(AP), -(SP)				0397
		03	DD	0004A		PUSHL	SMGSSCURRENT_LINE				0396
	00000000G	00	9F	0004C		PUSHL	#3				0395
62		06	FB	00052		PUSHAB	SMGS_ERRAT_LIN				
00000000G	00	6C	FA	00055	2\$:	CALLS	#6, LIBSTOP				0401
	54	AC	7C	0005C		CALLG	(AP), SMGSSFLUSH_NUMERIC				0412
50		01	DO	0005F	3\$:	CLRQ	84(AP)				0415
		04	00062			MOVL	#1, R0				0417
						RET					

; Routine Size: 99 bytes, Routine Base: _SMGSCODE + 0000

SMG\$NUMERIC_TAB TPARSE tables for numeric capabilities J 10
 1-003 NOT_NUMERIC - signal an unknown capability name 16-Sep-1984 01:08:25 VAX-11 Bliss-32 V4.0-742
 [SMGRTL.SRC]SMGNUMTAB.B32;1 Page 19
 (5)

```

 345      0418 1 ISBTTL 'NOT_NUMERIC - signal an unknown capability name'
 346      0419 1 ROUTINE NOT_NUMERIC =
 347      0420 1
 348      0421 1 ++
 349      0422 1 FUNCTIONAL DESCRIPTION:
 350      0423 1
 351      0424 1 We just found an unknown capability name. It could be a misspelling
 352      0425 1 or it could be a name misplaced under the wrong heading. Signal an
 353      0426 1 error.
 354      0427 1
 355      0428 1 CALLING SEQUENCE:
 356      0429 1
 357      0430 1   status = NOT_NUMERIC ()
 358      0431 1
 359      0432 1 FORMAL PARAMETERS:
 360      0433 1
 361      0434 1   NONE
 362      0435 1
 363      0436 1 IMPLICIT INPUTS:
 364      0437 1
 365      0438 1   AP      Points to TPARSE parameter block
 366      0439 1
 367      0440 1 IMPLICIT OUTPUTS:
 368      0441 1
 369      0442 1   NONE
 370      0443 1
 371      0444 1 COMPLETION STATUS:
 372      0445 1
 373      0446 1   SSS_NORMAL
 374      0447 1
 375      0448 1 SIDE EFFECTS:
 376      0449 1
 377      0450 1 --
 378      0451 1
 379      0452 2 BEGIN
 380      0453 2 BUILTIN
 381      0454 2   AP;
 382      0455 2   MAP
 383      0456 2   AP : REF BLOCK [,BYTE];
 384      0457 2
 385      0458 2 SIGNAL_STOP (SMGS_ERRAT LIN,
 386      0459 2   3, .SMG$SCURRENT_LINE,
 387      0460 2   .AP [TPASL_TOKENCNT],
 388      0461 2   .AP [TPASL_TOKENPTR],
 389      0462 2   SMGS_NOTNUMCAP)
 390      0463 2
 391      0464 1 END;           ! end of routine NOT_NUMERIC
  
```

	0000 00000 NOT_NUMERIC:					
7E	0000000G	00	9F 00002	.WORD	Save nothing	0419
	10	AC	7D 00008	PUSHAB	SMGS NOTNUMCAP	0458
	0000000G	00	DD 0000C	MOVQ	16(AP), -(SP)	0460
				PUSHL	SMG\$SCURRENT_LINE	0459

SMG\$NUMERIC_TAB TPARSE tables for numeric capabilities
1-003 NOT_NUMERIC - signal an unknown capability name

K 10

16-Sep-1984 01:08:25

VAX-11 Bliss-32 V4.0-742
[SMGRTL.SRC]SMGNUMTAB.B32;1

Page 20
(5)

00000000G 00 00000000G 03 DD 00012
00 9F 00014
06 FB 0001A
04 00021

PUSHL #3
PUSHAB SMG\$ERRAT LIN
CALLS #6, [IB\$STOP
RET

; 0458

; 0464

; Routine Size: 34 bytes, Routine Base: _SMG\$CODE + 0063

; 392 0465 1 !<BLF/PAGE>

L 10
1-003 SMGSNUMERIC_TAB TPARSE tables for numeric capabilities 16-Sep-1984 01:08:25 VAX-11 Bliss-32 V4.0-742
NOT_NUMERIC - signal an unknown capability name 14-Sep-1984 13:09:57 [SMGRTL.SRC]SMGNUMTAB.B32;1 Page 21 (6)
: 394 0466 1 END
: 395 0467 1
: 396 0468 0 ELUDOM ! End of module SMG\$TPARSE_TABLES

.EXTRN LIB\$\$STOP

PSECT SUMMARY

Name	Bytes	Attributes
-LIB\$KEY0\$	46 NOVEC,NOWRT, RD : EXE, SHR, LCL, REL, CON, PIC,ALIGN(1)	
-LIB\$STATES	420 NOVEC,NOWRT, RD : EXE, SHR, LCL, REL, CON, PIC,ALIGN(1)	
-LIB\$KEY1\$	253 NOVEC,NOWRT, RD : EXE, SHR, LCL, REL, CON, PIC,ALIGN(1)	
-SMG\$CODE	133 NOVEC,NOWRT, RD : EXE, SHR, LCL, REL, CON, PIC,ALIGN(2)	

Library Statistics

File	Total	Symbols Loaded	Percent	Pages Mapped	Processing Time
\$255\$DUA28:[SYSLIB]STARLET.L32;1	9776	30	0	581	00:00.9
\$255\$DUA28:[SMGRTL.OBJ]RTLLIB.L32;1	36	0	0	8	00:00.1
\$255\$DUA28:[SMGRTL.OBJ]SMGLIB.L32;1	469	0	0	38	00:00.4
\$255\$DUA28:[SMGRTL.OBJ]SMGTPALIB.L32;1	41	3	7	10	00:00.1
\$255\$DUA28:[SYSLIB]TPAMAC.L32;1	42	30	71	14	00:00.1

COMMAND QUALIFIERS

BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/NOTRACE/LIS=LIS\$:SMGNUMTAB/OBJ=OBJ\$:SMGNUMTAB MSRC\$:SMGNUMTAB/UPDATE=(ENH\$:SMGNUMTAB)

: Size: 133 code + 719 data bytes
: Run Time: 00:29.1
: Elapsed Time: 01:17.9
: Lines/CPU Min: 965
: Lexemes/CPU-Min: 92540
: Memory Used: 178 pages
: Compilation Complete

0360 AH-BT13A-SE
VAX/VMS V4.0

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SMGNUMTAB
LIS

SMGMSGTR
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SMGMSGTXT
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SMGSIMTRM
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SMGNUMPAR
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